

# ICSJWG Work Force Development Subgroup

Dr. John Saunders, Ben Wible, Marcus Sachs  
ICSJWG Spring 2010 Conference

# Subgroup Purpose

The Workforce Development Subgroup was formed to address challenges and priorities related to personnel awareness of cybersecurity issues within control systems environments and development of skills for more effective cyber risk management.

# Subgroup Objectives

- Identify existing ICS security curricula and make recommendations to enhance or create a new curriculum.
- Evaluate certification programs for ICS security professionals. Certification programs provide a variety of positive functions for any profession.
- Evaluate and develop an outreach program. An outreach program is useful to help different organizations understand one another and learn how they can work together.

# Subgroup Deliverables

- Prepare a gap analysis of control systems security workforce capabilities and development opportunities
- Prepare a feasibility study for a control systems security certification program
- Develop knowledge domain areas for a certification program
- Develop a control systems security workforce outreach plan.

# Objective 1

- Identify existing ICS security curricula and make recommendations to enhance or create a new curriculum.
  - Objective 1 Milestones:
    - Review existing ICS curricula at PHD, Masters, Bachelor and Vocational and Secondary Levels
    - Develop recommendations based on gap analysis of ICS security curriculum for implementation by academia.

# November Conference

## Objectives:

- Increase membership/Interaction of the Subgroup
- Work on Objective 1
  - Identify existing ICS education and training programs
  - Identify new ICS education and training programs needed
  - Evaluate certification programs

# Participation

## 14 individuals from a variety of stakeholder groups:

- National Defense University (2)
- DoD - CIA
- University of Tulsa
- George Mason University
- DHS CSSP (3)
- DHS Idaho National Labs
- Verizon
- Harris Corp
- Amtrack CISO
- Industrial Defender
- Critical Intelligence

# Subgroup Situation

## Accomplishments

- Completed Objective 1, goal 1 – review existing ICS curricula
- Dr. John Saunders has agreed to serve as co-chair with Ben Wible and Marcus Sachs
- Identified methods for improving collaboration
  - ICS Certifications Research/Spreadsheet
  - Various briefings and related material

# Subgroup Situation

## Accomplishments

- Completed Objective 1, goal 1 – review existing ICS curricula
  - Academic Paper entitled: “Industrial Control System Security: Workforce Training and Certifications.”
  - ICS Certifications Research/Spreadsheet
  - Various briefings and related material

# Subgroup Situation

## Current Work Plan

- Begin work to define the core competencies for the ICS education and training programs
- Improve group collaboration
- Increase group participants

# Subgroup Situation

## Next Steps

- Prepare a ICS curricula gap analysis
- Identify new ICS education and training programs needed
- Evaluate certification programs

# ICSJWG Work Force Development Subgroup

## Discussions

Dr. John Saunders, Ben Wible, Marcus Sachs  
ICSJWG Spring 2010 Conference